

Amendments to the Specification:

Please replace the title as follows:

~~DEVICE AND METHOD FOR DETECTING GAS LEAKAGE~~

GAS LEAK DETECTION DEVICE AND METHOD FOR SAME

Please replace the paragraph beginning on page 2, line 22, with the following rewritten paragraph:

Furthermore, the present invention also provides a gas leak detection device comprising a fuel gas supply source, a main valve that shuts down a fuel gas from the fuel gas supply source, a shutdown valve provided in a fuel gas supply channel downstream of the main valve, pressure monitoring means that monitors a pressure in the fuel gas supply channel between the main valve and the shutdown valve, depressurization treatment means that depressurizes the inside of the fuel gas supply channel, and determination means that monitors a variation of pressure in a sealed space of the fuel gas supply channel formed between the main valve and the shutdown valve after the main valve and the shutdown valve have been closed and determines the operation state of the main valve based on the variation of pressure in the sealed space. In the depressurization treatment, the fuel gas supply channel is depressurized to a pressure range in which the pressure can be monitored in the ~~pressure monitoring device~~pressure monitoring means.

Please replace the paragraph beginning on page 8, line 10, with the following rewritten paragraph:

The system for supplying the hydrogen gas as a fuel gas to the fuel cell stack 10 comprises a hydrogen tank 11, which is equivalent to the hydrogen gas supply source of the present invention, a main valve (shutdown valve) SV1, a pressure regulating valve RG, a fuel cell inlet shutdown valve SV2, a fuel cell outlet shutdown valve SV3 via the fuel cell stack

10, a gas-liquid separator 12, a shutdown valve SV4 for a gas-liquid separator, a hydrogen pump 13, a circulation route shutdown valve SV6, a recovery tank 15, and a circulation route shutdown valve SV7. The hydrogen gas is supplied by a hydrogen gas supply channel from the main valve SV1 to the fuel cell stack 10 and also by a circulation route R which partly overlaps the aforementioned supply channel and in which the hydrogen gas is circulated through the pressure regulating valve RG, shutdown valves SV2, SV3, gas-liquid separator 12, hydrogen pump 13, shutdown valve SV6, recovery tank 15, and ~~regular route shutdown valve SV7~~circulation route shutdown valve SV7.

Please replace the paragraph beginning on page 9, line 13, with the following rewritten paragraph:

The fuel cell inlet shutdown valve SV2 is closed based on a control signal of the control unit 20 when gas leak-gas leak detection in accordance with the present invention is implemented, for example, when power generation by the fuel cell is stopped. The change in pressure in a sealed space formed between the main valve SV1 and the shutdown valve SV2 when the main valve SV1 and the shutdown valve SV2 are closed is detected by a pressure sensor p1 or a pressure sensor p2, which is part of the pressure monitoring device in accordance with the present invention. The fuel cell outlet shutdown valve SV3 is also closed when power generation by the fuel cell is stopped.

Please replace the paragraph beginning on page 14, line 25, with the following rewritten paragraph:

First, the hydrogen gas remaining in the circulation route R is collected in the recovery tank 15. For this purpose, the control unit first closes the circulation shutdown valve SV7 (S4), increases the revolution speed of the hydrogen pump 13 (S6), and sends the hydrogen

gas remaining in the circulation route R into the recovery tank 15. At the same time, the control unit opens the purge shutdown valve SV5 (S5) and reduces the pressure inside the circulation route R. Because purging is conducted by opening the purge shutdown valve SV5, it becomes necessary to decrease the concentration of the discharged hydrogen gas. Accordingly, the control unit 20 increases the revolution speed of the compressor 22 (S8) and increases the quantity of air for diluting the purged hydrogen off-gas in the diluting device 14. The depressurization treatment of the circulation route R is further advanced by the recovery of the hydrogen gas to the recovery tank 15 and/or the purging of the hydrogen gas with the ~~purge control valve SV5~~ purge shutdown valve SV5.

Please replace the paragraph beginning on page 23, line 7, with the following rewritten paragraph:

As shown in Fig. 5, the fuel cell system of ~~Embodiment 1~~Embodiment 2 has a structure almost identical to that of the system of Embodiment 1, but the recovery tank 15 is provided in the vicinity of the main valve SV1.